

SECTION II—CLAIMS

1. (Currently Amended) An apparatus comprising:

a die mounted directly on a surface of a substrate, the die being connected to the substrate by a plurality of wires; and

~~a mold cap encapsulating the die and the plurality of wires, the mold cap comprising an electrically insulating portion encapsulating substantially all the wires and the entire die, and a thermally conductive portion encapsulating substantially all the electrically insulating portion, wherein the thermally conductive portion is in direct contact only with the substrate and the entire part of the surface of the electrically insulating portion that is not in contact with the substrate, the die or the wires.~~

a mold cap encapsulating the die and the plurality of wires, the mold cap comprising:

an electrically insulating portion encapsulating substantially all the wires and the entire die, and

a thermally conductive portion encapsulating substantially all the electrically insulating portion, wherein the thermally conductive portion is in direct contact only with the surface of the substrate to which the die is mounted and the entire part of the surface of the electrically insulating portion that is not in contact with the substrate, the die or the wires.

2. (Original) The apparatus of claim 1 wherein the die comprises an integrated circuit.

3. (Original) The apparatus of claim 1 wherein the electrically insulating material comprises a curable resin, a crosslinker, a catalyst, and a reinforcing filler.
4. (Original) The apparatus of claim 3 wherein the reinforcing filler comprises silica, alumina, zinc oxide, talc, or combinations thereof.
5. (Original) The apparatus of claim 1 wherein the thermally conductive material comprises a curable resin, a crosslinker, a catalyst, and a metal filler.
6. (Original) The apparatus of claim 5 wherein the metal filler comprises aluminum, silver, copper, gold, or combinations or alloys thereof.
- 7.-8. (Canceled)
9. (Original) The apparatus of claim 1, further comprising a heat dissipation device attached to, and in thermal contact with, the thermally conductive material.
- 10.-51. (Canceled)